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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,217	11/17/2003	Bryan E. Bloodworth	TI-35849	5016

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EXAMINER

SNIEZEK, ANDREW L

ART UNIT	PAPER NUMBER
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2651

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/715,217

Applicant(s)

BLOODWORTH ET AL.

Examiner

Andrew L. Sniezek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17 is/are allowed.
- 6) ☒ Claim(s) 18 is/are rejected.
- 7) ☒ Claim(s) 19-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/17/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings filed 11/17/03 are acceptable to the examiner.

### ***Information Disclosure Statement***

2. The information disclosure statement filed 11/17/03 has been considered.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 18 is rejected under 35 U.S.C. 102(e) as being anticipated by Kamijima (US 20030099054A1)

.Kamijima et al. teaches a head arrangement and corresponding method of operation for controlling the fly height of a read/write assembly in a disk drive (see figures 1, 9 and 10 along with corresponding disclosure) , that includes connecting a first terminal (node depicted in figure 10 connecting elements 99c and 99e to heater (64) including a heating element (68)) which during a read operation a first voltage is applied to the first terminal by the use of elements (99a, 99b and 99c) and during a write operation applying a second voltage to the terminal by the use of elements (99a, 99d, 99e).

***Allowable Subject Matter***

5. Claims 1-17 are allowed.

6. Claims 19-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The claimed circuit for controlling the fly height of a read/write head in a disk drive having a heat element resistor as set forth in claim 1 that includes a voltage driver having an input and an output with a control circuitry that couples a read current signal and a write current signal to an input of the voltage driver depending upon the read or write operation of the drive is neither taught by nor an obvious variation of the art of record. Claims 2-14 depend on claim 1. The claimed circuit for controlling the fly height of a plurality of read/write head assemblies having a plurality of heat element resistors as set forth in claim 15 including the use of a plurality of voltage drive circuits, demultiplexer and control circuitry that operates in a manner as set forth in response to a head select signal is neither taught by nor an obvious variation of the art of record. Claims 16-17 depend on claim 15. The claimed method as set forth in claim 19/18 including stored read and write current values that are applied to an input of a voltage driver coupled to a terminal of the heat element resistor is neither taught by nor an obvious variation of the art of record. Claims 24-26 depend on claim 19. The claimed

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method as set forth in claim 20/18 that applies a underdrive voltage and an overdrive voltage to the voltage driver in response to the detection of a first logic level transition and a second logic level transition is neither taught by nor an obvious variation of the art of record. Claim 21 depends on claim 20. The claimed method as set forth in claim 22/18 that includes monitoring a mirrored current corresponding to a current driven at the first terminal of the heat element resistor is neither taught by nor an obvious variation of the art of record. Claim 23 depends on claim 22. The claimed methods as set forth in claim 27/18 that applies an initial voltage to the first terminal of the heat element resistor responsive to receiving a signal indicating the disk drive is not selected is neither taught by nor an obvious variation of the art of record.

### ***Conclusion***

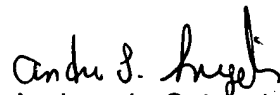
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bajorek et al. (US 20040075940A1) is cited for teaching maintaining a flying height by using a heating element.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Snizek whose telephone number is 571-272-7563. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Andrew L. Snizek  
Primary Examiner  
Art Unit 2651

A.L.S.  
5/3/05